



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) **EP 1 108 790 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
20.06.2001 Bulletin 2001/25

(21) Application number: 00127688.0

(22) Date of filing: 18.12.2000

(51) Int Cl.7: **C12Q 1/68**, C07H 21/04,  
C12N 15/63, C07K 14/34,  
C12R 1/15, G06F 17/00,  
C12R 1/13, G01N 33/50

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU**  
**MC NL PT SE TR**  
Designated Extension States:  
**AL LT LV MK RO SI**

(30) Priority: 16.12.1999 JP 37748499  
07.04.2000 JP 2000159162  
03.08.2000 JP 2000280988

(83) Declaration under Rule 28(4) EPC (expert  
solution)

(71) Applicant: **KYOWA HAKKO KOGYO CO., LTD.**  
Chiyoda-ku, Tokyo 100-8185 (JP)

(72) Inventors:  
**Satochi,**  
c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)  
• **Mizoguchi, Hiroshi,**  
c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)

- **Ando, Selko,** c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Hayashi, Mikio,**  
c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Ochiai, Kelko,** c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Yokoi, Haruhiko,**  
c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Tateishi, Naoko,**  
c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Senoh, Akihiro,** c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Ikeda, Masato,** c/o Kyowa Hakko Kogyo Co., Ltd.  
Machida-shi, Tokyo 194-8533 (JP)
- **Ozaki, Akio,** c/o Kyowa Hakko Kogyo Co., Ltd.  
Hofu-shi, Yamaguchi 747-8522 (JP)

(74) Representative: **VOSSIUS & PARTNER**  
Siebertstrasse 4  
81675 München (DE)

(54) **Novel polynucleotides**

(57) Novel polynucleotides derived from microor-  
ganisms belonging to coryneform bacteria and frag-  
ments thereof, polypeptides encoded by the polynucle-  
otides and fragments thereof, polynucleotide arrays

comprising the polynucleotides and fragments thereof,  
recording media in which the nucleotide sequences of  
the polynucleotide and fragments thereof have been re-  
corded which are readable in a computer, and use of  
them.

EP 1 108 790 A2

BEST AVAILABLE COPY

# BEST AVAILABLE COPY

LOCUS AX127152 349980 bp DNA linear PAT 11-MAY-2001  
 DEFINITION Sequence 7068 from Patent EP1108790.  
 ACCESSION AX127152 AX114121  
 VERSION AX127152.1 GI:14041140  
 KEYWORDS  
 SOURCE  
 ORGANISM *Corynebacterium glutamicum*.  
*Corynebacterium glutamicum*  
 Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;  
 Actinomycetales; Corynebacterineae; Corynebacteriaceae;  
 Corynebacterium.  
 REFERENCE 1 (bases 1 to 349980).  
 AUTHORS Nakagawa, S., Mizoguchi, H., Ando, S., Hayashi, M., Ochiai, K.,  
 Yokoi, H., Tateishi, N., Senoh, A., Ikeda, M. and Ozaki, A.  
 TITLE Novel polynucleotides  
 JOURNAL Patent: EP 1108790-A 7068 20-JUN-2001;  
 KYOWA HAKKO KOGYO CO., LTD. (JP)  
 FEATURES  
 source Location/Qualifiers  
 1. 349980  
 /organism="Corynebacterium glutamicum"  
 /db\_xref="taxon:1718"  
 /note="Seq 1 to long (3.309.400) split in 11, seq 7068  
 2.700.001 3.049.980"  
 BASE COUNT 81250 a 97718 c 90621 g 80391 t  
 ORIGIN

## Alignment Scores:

Pred. No.:	1.74e-116	Length:	349980
Score:	1968.00	Matches:	382
Percent Similarity:	100.00%	Conservative:	0
Best Local Similarity:	100.00%	Mismatches:	0
Query Match:	100.00%	Indels:	0
DB:	6	Gaps:	0

US-09-919-831-3 (1-382) x AX127152 (1-349980)

Qy 1 MetAsnPheTyrProProSerValProIleAsnProAlaTrpArgProProThrValThr 20  
 Db 273205 ATGAATTTTACCCACCATCTGTACCTATTAACCCTGCGTGGCGTCCACCCACAGTAACT  
 273146

Qy 21 ValGlnAlaGlyArgProAlaArgThrProGlyAlaProMetAsnProProIleThrLeu 40  
 Db 273145 GTGCAAGCGGGACGGCCAGCCAGAACTCCTGGTGCCTGATGAACCCACCTATCACGTTG  
 273086

Qy 41 SerSerThrTyrValHisAspSerGluLysAlaTyrGlyArgAspGlyAsnAspGlyTrp 60  
 Db 273085 TCCAGCACTTATGTTTCATGATTCAGAAAAGCTTATGGGCGCGATGGCAATGATGGATGG  
 273026

Qy 61 GlyAlaPheGluAlaAlaMetGlyThrLeuAspGlyGlyPheAlaValSerTyrSerSer 80  
 Db 273025 GGTGCATTTGAGGCTGCCATGGGAAGCTTAGATGGTGGGTTGCGGGTATCTTATTCTTCA  
 272966

Qy 81 GlyLeuAlaAlaAlaThrSerIleAlaAspLeuValProThrGlyGlyThrValValLeu 100  
 |||||||

LOCUS AX123145 1146 bp DNA linear PAT 11-MAY-2001  
 DEFINITION Sequence 3061 from Patent EP1108790.  
 ACCESSION AX123145  
 VERSION AX123145.1 GI:14040633  
 KEYWORDS .  
 SOURCE Corynebacterium glutamicum.  
 ORGANISM Corynebacterium glutamicum  
 Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;  
 Actinomycetales; Corynebacterineae; Corynebacteriaceae;  
 Corynebacterium.  
 REFERENCE 1 (bases 1 to 1146)  
 AUTHORS Nakagawa,S., Mizoguchi,H., Ando,S., Hayashi,M., Ochiai,K.,  
 Yokoi,H., Tateishi,N., Senoh,A., Ikeda,M. and Ozaki,A.  
 TITLE Novel polynucleotides  
 JOURNAL Patent: EP 1108790-A 3061 20-JUN-2001;  
 KYOWA HAKKO KOGYO CO., LTD. (JP)  
 FEATURES Location/Qualifiers  
 source 1. .1146  
 /organism="Corynebacterium glutamicum"  
 /db\_xref="taxon:1718"  
 BASE COUNT 254 a 275 c 314 g 303 t  
 ORIGIN

Alignment Scores:

Pred. No.:	1.44e-119	Length:	1146
Score:	1968.00	Matches:	382
Percent Similarity:	100.00%	Conservative:	0
Best Local Similarity:	100.00%	Mismatches:	0
Query Match:	100.00%	Indels:	0
DB:	6	Gaps:	0

US-09-919-831-3 (1-382) x AX123145 (1-1146)

Qy	1	MetAsnPheTyrProProSerValProIleAsnProAlaTrpArgProProThrValThr	20
Db	1	ATGAATTTTACCCACCATCTGTACCTATTAACCCTGCGTGGCGTCCACCCACAGTAACT	60
Qy	21	ValGlnAlaGlyArgProAlaArgThrProGlyAlaProMetAsnProProIleThrLeu	40
Db	61	GTGCAAGCGGGACGGCCAGCCAGAACTCCTGGTGCGCCGATGAACCCACCTATCACGTTG	120
Qy	41	SerSerThrTyrValHisAspSerGluLysAlaTyrGlyArgAspGlyAsnAspGlyTrp	60
Db	121	TCCAGCACTTATGTTTCATGATTACAGAAAAGCTTATGGGCGCGATGGCAATGATGGATGG	180
Qy	61	GlyAlaPheGluAlaAlaMetGlyThrLeuAspGlyGlyPheAlaValSerTyrSerSer	80
Db	181	GGTGCATTTGAGGCTGCCATGGGAAGCTTAGATGGTGGGTTGCGGGTATCTTATTCTTCA	240
Qy	81	GlyLeuAlaAlaAlaThrSerIleAlaAspLeuValProThrGlyGlyThrValValLeu	100
Db	241	GGTTTGGCAGCGGCAACGTCGATTGCTGATTTGGTTCCTACTGGTGGCACAGTTGTTTTA	300
Qy	101	ProLysAlaAlaTyrTyrGlyValThrAsnIlePheAlaArgMetGluAlaArgGlyArg	120
Db	301	CCTAAAGCTGCCTATTATGGCGTGACCAATATTTTCGCCAGGATGGAAGCCCGCGGAAGG	360

BEST AVAILABLE COPY

**THIS PAGE BLANK (USPTO)**